

ABSTRACT

An online payment system and a secure authentication method, including a customer, a merchant and a payment gateway connected over Internet; said payment gateway is responsible for processing payment information from the network, authenticating identities of the customer and the merchant and validating the validity of transaction; after a processing system in the payment gateway confirms the transaction is valid, said payment gateway sends a payment request and informs the two parties in the transaction of the payment information after the payment is accomplished; an assistant customer identity authentication system is arranged between the payment gateway and the customer, which connects the customer to the payment gateway in a non-Internet approach; the payment gateway generates an authorization code dynamically and transfers it to the customer via the assistant customer identity authentication system; the customer enters the authorization code on correct page in the payment gateway to pass identity authentication. The authentication method and the payment system greatly reduce the possibility that online data is stolen, by using both Internet and non-Internet authentication mode, and thereby improves security of online payment and delivers flexibility and convenience.